



Alpha Magnetic Spectrometer  
NASA / DOE

## Alpha Magnetic Spectrometer Weekly Reports

July 9, 2004



National Aeronautics and  
Space Administration

### Upcoming Events:

- AMS General TIM - July 19 - 23, 2004 - CERN Geneva, Switzerland
- Thermal Control System (TCS) Delta Critical Design Review ( $\Delta$ CDR) - Postponed (Schedule under review) - Location TBD
- AMS-02 Phase II Safety Review - Fall 2004 (Schedule under review) - JSC
- STA Vacuum Case Delivery (on dock at STADCO) - October 13, 2004
- Flight Vacuum Case Delivery (on dock at STADCO) - November 3, 2004
- AMS General TIM - October 18 - 22, 2004 – JSC
- AMS General TIM - January 10 - 14, 2005 – KSC
- AMS-02 Avionics Functional Interface Test (FIT) - January 2005

### Upcoming Tests:

- O-Ring Test Fixture (OTF) Vacuum Test - On going - J13
- STA Acoustic Test - Date TBD - ESTEC - Noordwijk, Netherlands (Schedule under review)
- STA Sine Sweep Test - Date TBD - INFN - Terni, Italy (Schedule under review)
- Full Assembly Modal & Static Tests - Date TBD - IABG - Munich, Germany
- Interface Plate Static Test - Date TBD - Location TBD
- Lower Joint Static Test - Date TBD - Location TBD

### Status:

- Lockheed Martin (LM) AMS Project Management continue to work issues related to the moving of the project from SM/Mission and Project Management Office to EA/Engineering Directorate. Work continued on the updating of AMS-02 documents to support the Project Re-baselining Review. Review Item Discrepancies (RIDs) written against the documents were addressed as they were received. The affected documents include the Project Technical Requirements Specification



Alpha Magnetic Spectrometer  
NASA / DOE

## Alpha Magnetic Spectrometer Weekly Reports

July 9, 2004



National Aeronautics and  
Space Administration

(PTRS) for the Payload Integration Hardware (PIH), the Experiment/Vacuum Case Interface Control Document (ICD), the Experiment/Payload Integration Hardware (PIH) ICD, the Program Management Plan (PMP), and the Configuration Management Plan. RIDs written against ISSP-controlled documents were forwarded to the responsible organization for action. A total of 77 RIDs were received: 44 were "Closed", 20 were "Closed pending documentation (final updates)", 1 is "Closed" pending concurrence of initiator, 7 are "Open" pending completion of "Action", and 5 are "Open" and will be discussed/resolved at the Re-baselining Review Outbrief scheduled for July 15. Also in support of the Re-baselining Review, a meaningful scaling system was tailored for use in the AMS-02 Risk Management System. Accounts on the web-based AMS Integrated Risk Management Application were established for all members of the project team.

- LMSO AMS personnel supported the AMS-02 Electronics Technical Interchange Meeting (TIM) at the Chung-shan Institute of Science and Technology (CSIST) in Taiwan, July 5-9, 2004 .
- The O-Ring Test Fixture (OTF) was isolated from the turbo pump and data was recorded for the pressure rise. Preliminary results indicate the rate of rise is approximately the same as it was prior to the disassembly, cleaning, and re-assembly of the OTF. The OTF is being pumped down again in preparation for the performance of helium leak checks.
- The drawings for the Unique Support Structure - 02 (USS-02) Extruded Beams were uploaded to the Electronic Drawing Review System (EDRS) for review only. Feedback received from the reviewers is being incorporated into the design. The Extruded Beams were selected as replacements for the Friction Stir Welded (FSW) Beams as a resolution to the stress cracking failure of the pathfinder FSW Beams.
- The drawing for the Upper USS-02 Assembly was revised and submitted for design review and checking. The drawing for the Structural Test Article (STA) Vacuum Case Assembly is in work.
- Component and subassembly drawings for the USS-02 Assembly Fixture were final checked, updated and uploaded to the EDRS for approval and final release. The top level assembly drawings for the Assembly Fixture are in work.
- Efforts are continuing on the incorporation of design changes and redlines on the Vacuum Case Test Fixture (VCTF) drawings.
- LMSO AMS personnel are coordinating a meeting with representatives of the Crew and Thermal Systems Division (CTSD) to discuss the multi-layer insulation (MLI) required for the Vacuum Case. CTSD is responsible for fitting and fabricating the MLI required for use in the Vacuum Case.



Alpha Magnetic Spectrometer  
NASA / DOE

## Alpha Magnetic Spectrometer Weekly Reports

July 9, 2004



National Aeronautics and  
Space Administration

- Vacuum Case Milestones
  - STA Support Rings Complete - July 2004
  - Weld Development - March 2004 - July 2004
  - Flight Support Rings Complete - July 2004
  - First Article Weld Complete - July 2004
  - STA Conical Flanges Complete - July 2004
  - Shipping Fixture Complete - August 2004
  - STA Line Drill Operations Complete - August 2004
  - Flight Conical Flanges Complete - August 2004
  - STA Match Drill Procedure Complete - August 2004
  - STA Weld Complete (for proof test @ STADCO) - August 2004